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TECHNOLOGIES COMPANY

HAZARDOUS WASTE DETERMINATION

CFA SEWAGE TREATMENT PLANT DECONTAMINATION AND DISMANTLEMENT, OU 4-13 SAMPLING AND REMOVAL ACTION ACTIVITIES

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Environmental Affairs
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I. WASTE STREAM

The waste stream discussed in this Hazardous Waste Determination (HWD) includes wastewaters discharge to the Central Facilities Area (CFA) sewage treatment system. The first components of the system were constructed by the Navy in 1944. This system was composed of sewer lines, the CFA-716 Septic Tank and drying bed, and the drainfield. The system was upgraded to a sewage treatment plant (STP) in 1953. The components added at that time included a trickling filter (CFA-766), a digester, a new sludge drying bed, a pumphouse (CFA-691), and additional underground piping. The STP was further modified in the early 1980's with the addition of a sewage grinder and pump upgrades. The old Navy system and the STP were used to treat and dispose of process wastwaters from 1944 until 1995. A new sewage system was constructed and is now operational at CFA.
The STP is planned for dismantlement under the D&D program. D&D operations will include dismantlement of the components of the STP. Potential contaminant releases from the STP are included in Operable Unit (OU) 4-08 in the Federal Facilities Agreement and Consent Order (FFA/CO) and are managed by the Environmental Restoration Directorate. Potential contaminant releases from the components of the STP to the environment will be characterized and remediated, if necessary, under the authority of the Comprehensive Environmental Compensation and Liability Act (CERCLA). This HWD includes dismantlement activities conducted by D&D and characterization and remediation activities conducted under the FFA/CO.

II. WASTE DESCRIPTION

To characterize the waste streams for the Decontamination and Dismantlement (D&D) activities, samples were collected from locations intended to represent each waste stream. The sample locations were selected in areas in and around the CFA STP including the CFA-691 treatment building (pumphouse), CFA-766 trickle filter, digester, primary and secondary clarifiers, CFA-716 septic tank, and in-use drying beds. The purpose of this sample collection was to provide a technical representation of the materials to determine disposal options. Radiological characterization consisted of direct radiation measurements and analytical data from samples collected to identify radionuclides and determine the specific activity of each radionuclide. The chemical characterization included analysis for PCB's, TCLP metals, TCLP VOC's, and TCLP SVOC's, as identified in the supporting documentation. The only wastes expected will be that left as part of the D&D activity, including the structural parts and components and waste from activities in support of the OU4-13 remedial investigation, and removal action.

A. WASTE QUANTITY: The estimated waste quantities from each waste stream has not been determined. This will be part of the Characterization and Decision Analysis for the CFA STP (CFA-08 Area).

B. WASTE STORAGE LOCATION: The waste will be stored at the sewage treatment plant as non-hazardous, non-regulated material, with the exception of radioactive contaminated waste, until final disposition is determined. This will be done in the Characterization and Decision Analysis for the Central Facilities Area Sewage Treatment Plant (CFA-08 Area). Waste will be segregated until actual remediation at the facilities are started.

III. HAZARDOUS WASTE DETERMINATION (HWD)

1. Is the material a solid waste? This is a solid waste under the definition of 40 CFR 261.2.

2. Is the waste excluded under 40 CFR 261.4? This waste does not meet the exclusion requirements under 40 CFR 261.4.

3. Is the waste listed under 40 CFR 261 SUBPART D? On the basis of process knowledge, interviews with knowledgeable personnel at facilities that were potential sources to the STP, and assessment of available analytical data, the waste is not listed under 40 CFR 261 Subpart D.

4. Is the waste identified under 40 CFR 261 SUBPART C? On the basis of available analytical data, the waste identified in this HWD does not meet the requirements of RCRA characteristic waste under 40 CFR 261 Subpart C.

IV. WASTE TREATMENT/DISPOSAL DETERMINATION

NOTE: The information provided in this Hazardous Waste Determination Report was obtained from the following information/sources:

- Limited Scope and Hazard Characterization Plan for the CFA Sewage Treatment Plant, INEL-96/0331 Revision 0, September 1996.
- Characterization and Decision Analysis for the Central Facilities Area Sewage Treatment Plant (CFA-08 Area), INEL-96/360, Revision 0, April 1997.
- Abbreviated Sampling and Analysis Plan for the Old Navy septic System, EMS-048-96, Revision 1, July 1, 1916
- Closure Report for Sampling of the Old Navy Septic System; EMS-048-96 - RSR-81-96, September 10,1996
- Closure Report for Sampling of CFA Drying Beds; EMS-063-94 - RSR-29-94
- DOE letter from David L. Wessman, Environmental Specialist to Mr. Randal W. Steger, Manager, Permits and Enforcement, Idaho Division of Environmental Quality.
- Analytical data alone is not appropriate to determine listed waste status. Therefore, interviews with knowledgeable personnel were conducted to determine if known discharges of listed waste could be documented for these waste streams. Interviews were conducted with the following personnel for these locations:

  Laboratories: Dan McDonald - (Labs CFA-625 and CFA-633) No solvents or acids were allowed in laboratory drains tied to the sewage treatment plant. There were signs posted above the sinks stating what could be disposed down the drains. Sink drains were primarily used for neutralized water.

  Ken Thomas - (Lab-612) No solvents or organics were allowed in drains tied to the sewage treatment plant. All listed waste generated in Lab-612 is stored in SAA's and disposed accordingly.

  Samuel Pole/Dean Hindman - (RESL Lab) This is a radiochemistry laboratory that performed analytical procedures on environmental samples. Laboratory tests were also performed to be used in the development of procedures. Prior to RCRA compliance by federal operations, most analytical wastes were discharged to the wastewater collection system. Wastes included chemical mixtures and solutions with the following organics: DBHQ, 2-ethyl hexanol, 2-ethyl heptane, HDEHP, N-heptane, xylene, Aliquat 336, Insta-gel (xylene based), Insta-gel XF (pseudocumene based), ethanol, methanol, acetone, carbon tet, toulene, and naphthalene. Some of these are still used today for various analytical procedures but are collected for disposal in accordance with RCRA.. To the best of their knowledge, none were used for their solvent properties. Discharge of these mixtures ended in approximately 1980 based on memories of laboratory personnel. Reference OV message from Samuel B. Pole to Michael D. Jorgensen, dated 4-17-97.
  Craft Shops: Dixie Lainhart - There were no solvents or organics used in the craft shops that would have accessed a drain to the sewage treatment plant. There have not been any leaks or spills of solvents or PCB's that would have accessed a drain to the sewage treatment plant.

Warehouses: Niles Hanson - No solvents were used in the warehouse facilities. There have not been any leaks or spills of solvents or PCB's that would have accessed a drain to the sewage treatment plant.
Photographic Services: Mike Crane - No solvents were used in the photographic services process. The photo lab keeps a log of all discharges to the drain. The last sample results from the facility were non-hazardous.
Vehicle Services: Reference Hazardous Waste Determination for the Decontamination and Dismantlement of the Maintenance and Repair Shop (CFA-665) dated March 12, 1997.
Medical Dispensary: Deanna Kriner/Judy Delonas - No solvents were used in the medical facility. Isopropyl alcohol is used in pre-packaged swabs. All medical waste is treated as bio-hazardous and is contracted to be shipped off-site. Waste from rad-contaminated sick/injured personnel is controlled by health physics.
Maintenance Repair Shop: Reference Hazardous Waste Determination for the Decontamination and Dismantlement of the Maintenance and Repair Shop (CFA-665) dated March 12, 1997.
Hot Laundry: Chuck Hicks - There have been no known discharge of solvents from the laundry facility to the sewage treatment plant. Acetone was used from 1980 to 1986 to clean paint from respirators. Acetone was kept in small quantities of <1-gallon and was applied to a rag for use in cleaning the respirator then discarded appropriately. A citrus-based solvent was used from 1986 until facility closure. Reference OV message from Charles L. Hicks to Michael D. Jorgensen, dated 4-17-97.

Based on the information presented above, there has never been listed waste, as defined by 40 CFR 261 Subpart D, intentionally disposed to any sump, drain, etc. which was tied to the sewage treatment plant.

In-flow of waste-water from sources to the sewage treatment plant with the potential of carrying listed waste codes was terminated in 1986 when the laundry facility discontinued the use of acetone for cleaning respirators and between 1980 and 1986 when the laboratories discontinued disposal of analytical wastes. Approximately 142,000 gallons of non-hazardous waste-water flowed through this system on average each day with a total of approximately 570 million gallons having flowed through the system to the sewage treatment plant from 1987 through 1994. Operations were terminated in 1995.

This determination provides the basis for a non-hazardous classification of this waste stream. This is based on process knowledge, including the known amount of in-flow to the facility, referenced analytical data, and referenced interviews with individuals having knowledge of the facilities that were potential sources to the sewage treatment plant.

SIGNATURE PAGE

WASTE DETERMINATION PROVIDED BY: Michael D. Jorgensen 5/5/97
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